FE-262WD

Diagram No. 1211-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey Wire Drag & Side Scan Sonar

Field No. R/H-20-15-83/84

Office No. FE-262 WD

LOCALITY

State New York

General Locality Long Island Sound

Locality The Race

1983-84

CHIEF OF PARTY
LCDR D.D.Winter & LCDR R.K.Norris

LIBRARY & ARCHIVES

DATE July 17, 1985

☆U.S. GOV. PRINTING OFFICE: 1980—766-230

Area
Int
13212
13211
13209
12354
13205
12372 SEA
12300 INC

TO SIGN OFF SEE "RECORD OF APPLICATION"

NOAA FORM 77-28 (1-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

FE-262 WD

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

R/H 20-15-83/84

State NEW YORK

General locality LONG ISLAND SOUND

Locality ~~NORTHVILLE CORRIDOR - OFFSHORE LONGITUDE 072-08-00W to 072-01-00W.~~ THE RACE

Scale 1;20,000 Date of survey 26 Oct. 1983 - 26 Oct. 1984

Instructions dated June 17, 1983 & April 12, 1984 Project No. OPR-B660-RU/HE-83/84

Vessels NOAA SHIPS RUDE (9040) and HECK (9140)

Chief of party LCDR Robert K. Norris (1984) and LCDR Donald D. Winter (1983)

Surveyed by R.K. Norris, D.D. Winter, N.G. Millett, E.M. Clark, J.C. Talbott, T.G. Callahan

Soundings taken by echo sounder, hand lead, pole Klein S/Ns 088 & 223, DE719B S/Ns 5799,5497 & 6212 & Wire Drag DSF 6000n S/Ns B051N,A116N

Graphic record scaled by G.L.A., T.G.C., E.M.C.

Graphic record checked by R.K.N., T.G.C., E.M.C., N.G.M., W.J.A.

Protracted by N/A Automated plot by N/A

Verification by Evaluation and Analysis Group, Hydrographic Surveys Branch, AMC.

Soundings in fathoms feet at MLW MLLW ~~Predicted Tides~~ Smooth Tides

REMARKS: All times are recorded in UTC. See Coast Pilot Report and Loran-C comparison data for OPR-B660-RU/HE-83/84, for additional data on this survey.

AWOIS and SURF ✓ Rec'd 4/86

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*= Data Removed from the Descriptive Report and filed with the field records.

DESCRIPTIVE REPORT TO ACCOMPANY
HYDROGRAPHIC SURVEY FE-262WD R/H 20-15-83/84
1:20,000 SCALE, 1983-1984
NOAA SHIPS RUDE & HECK
LCDR ROBERT K. NORRIS, COMDG. (1984)
LCDR Donald D. Winter, Comdg. (1983)

A. Project Authority

This project was conducted during a two year period in accordance with Hydrographic Project Instructions OPR-B660-RU/HE-84 and OPR-B660-RU/HE-83, for the Southern New England Coast. The 1984 instructions are dated April 12, 1984, with one amendment to these instructions, change No. 1 dated May 21, 1984. The 1984 instructions supersede the previous instructions issued for OPR-B660-RU/HE-83 dated 17 June, 1983, with two changes to those instructions, dated 22 July and 8 December, 1983. The purpose of this project is to provide wire-drag and sonar clearance of the Northville Industries Corporation oil tanker route, to provide clearance depths over selected wreck sites, and to verify or disprove certain reported submerged wrecks along the south coast of New England. - A change #2 to the 1984 instructions were issued after completion of this survey. This change does not affect this survey.

B. Characteristics and Limits of Area Surveyed

This report contains (FE-2645S) that area of the one mile wide tanker route from the junction with R/H 20-14-83/84 (FE-268WD) at approximately longitude 072°-08'-00" W to the junction with R/H 20-16-84 at approximately longitude 072°-01'-00" W. The 1983 survey work consisted of an initial sonar investigation with 100-percent coverage of the bottom in the corridor area utilizing 200 meter vessel track spacing and the sonar recorder operated at the 200 meter range scale. The amount of towfish cable set out over the stern was regularly adjusted in an attempt to operate the fish at 40 meters off the bottom, as indicated in section 7.12.1 of the Project Instructions. However, the bottom topography was very irregular in this area of Long Island Sound with depths ranging from nearly 300 feet in The Race to 30 feet in the vicinity of Valiant Rock and Race Rock. Therefore, this requirement could not always be met in all areas of this survey. - Concur

The 1984 survey work consisted of one sonar split line run in the vicinity of Race Rock and wire-drag clearance of several boulder fields located during 1983.

C. Survey Vessels

This survey was accomplished by the NOAA Ships Rude (9040) and Heck (9140).

D. Hydrographic Sheets

The hydrographic sheets used in this survey were made of mylar and were constructed with the Digital PDP 11/34 computer S/N AG22645 and Houston Instruments roll-bed plotter S/N 8731-8

aboard the Ship Rude.

The field sheets were plotted at a scale of 1:20,000 and were used aboard each vessel to hand plot the towing vessel's position while on line. A smooth sheet was also plotted aboard the ship using the same equipment as described above. This smooth sheet was used to machine plot the towing vessel's position, to hand plot any targets or large contacts, to delineate the limits of rocky or boulder areas, and to illustrate the area covered by side scan sonar operations. The 1984 drag strip data was plotted at a scale of 1:20,000 as overlays to be used in conjunction with the smooth sheet. The field records are being sent to the Atlantic Marine Center for verification, ~~and~~ smooth plotting, and Evaluation and Analysis.

E. Equipment and Techniques

All side scan sonar coverage was accomplished with the Klein systems provided by AMC. These systems consisted of a Model 521 recorder, a 100 KHz towfish, a K-Wing depressor and a towcable. Recorder Unit 223 was used aboard the HECK during the 1983 field season and recorder unit 88 was used aboard the RUDE. Sonar operations were completed during 1984 with recorder 88 used aboard the HECK.

To minimize the potential for damaging the towfish, the initial sonar investigation was first cautiously conducted at slack water in the vicinity of Valiant and Race Rocks where the irregular depths steeply rise from 300 feet to between 30 and 40 feet. The remainder of the survey was then investigated attempting to operate the towfish at 40 meters off the bottom. In addition, a crossline was run at the constricted area of the corridor between Valiant and Race Rocks to insure that no large contacts exist in this area.

Del Norte rates obtained on fixes were recorded with Eaton Model 7000+ serial printers during this survey. These printers worked fairly well considering the fact that they were not designed to be operated in a marine environment. The printers would often type out a line of meaningless characters or rates from the previous fix before the current fix was recorded. The printer records were annotated such that these meaningless characters and extraneous rates were lined out leaving the correct fix rates clearly displayed.

A Raytheon model DE-719B echo sounder was operated and annotated concurrently during all 1983 side scan sonar operations. A model DSF 6000N was operated during all 1984 sonar and wire-drag operations. The echo sounder recordings were reviewed daily to ensure that no large objects located directly under the sonar towfish had gone undetected. During 1983, unit S/N 5799 was used aboard the Rude on JDs 299 and 300 through fix 119. This unit was removed from service on JD 300 as a result of poor analog recordings below 150 feet. Spare unit S/N 5497 was used aboard the Rude during the remainder of JD 300 and on JDs 307, 308, and 311. Unit S/N 6212 was used aboard the Heck on JD 300. During 1984 operations, unit B051N was used aboard the RUDE and unit A116N was used aboard the HECK.

Although it is not anticipated that these soundings

records will be used for charting purposes, the settlement and squat data for the Rude and Heck, obtained in Norfolk Harbor on 25 January 1983, is included in this report. No velocity corrections or settlement and squat determinations were actually conducted within or during this project. The 1984 wire-drag operations were conducted with standard ship wire-drag equipment and techniques. The soundings recorded were apparently not plotted by the field and no automated tapes of these soundings were submitted, therefore no plot of these soundings is available. The soundings collected are of reconnaissance value only and not intended for charting. However five of these soundings were scaled and smooth plotted during Evaluation and Analysis. See the Evaluation Report, section 6.

F. Control Stations

Two electronic control stations were used for this survey. Station 01 was SAYBROOK LIGHTHOUSE (1861), at latitude 41-16-16.894 N and longitude 072-20-37.01X W with an elevation of 21.6 meters. Station 02 was NEW LONDON LEDGE LIGHTHOUSE (1932), located at latitude 41-18-20.79X N and longitude 072-04-40.51X W with an elevation of 17.7 meters. Both stations were located by NGS and the adjusted positions for these stations were obtained from published NGS horizontal control data. All stations are of Third-Order, Class I control accuracy or better. The station positions are based upon the North American Datum of 1927.

G. Calibration and Position Control

Vessel positioning for all work was accomplished with the Del Norte 520 series electronic positioning equipment operated at a frequency of 9400 MHz in the range-range mode. A listing of DMU and master units used by the vessels during this survey are listed by Julian Day in Appendix A. During 1983 operations, the remote installed at Station 01 was code 76, serial number 3004. Remote 74, serial number 3003, was installed at Station 02. During the 1984 season, remote 84, serial 3003, was installed at station 01 and remote 86, serial 3004, was installed at station 02. Del Norte codes were changed to 80 series during 1984 to eliminate interference from other users.

Five baseline calibrations were performed during this survey. All baseline calibrations were conducted in the immediate work area and entirely over water in accordance with AMC OPORDER 79. Baseline calibration distances were determined by the HP 3800A electronic distance measuring instrument, serial number 0987A00157. The following is a list of the baseline calibrations, as measured by the HP 3800A:

Date	Location	Range
27 August, 1983	Belle Terre Beach to Port Jefferson W. Jetty Lt.	2601.1m
30 October, 1983	Pier 4S, NUSC, New London, CT to S. Groton Jetty	2312.0m
15 November, 1983	Pier 4S, NUSC, New London, CT to S. Groton Jetty	2312.0m

28 September, 1984	Newport Naval Pier 2 to Gould Island S.E. Pier	1933.2m
29 October, 1984	Pier 4S, NUSC, New London, CT to S. Groton Jetty	2312.0m

Daily calibrations were conducted in the vicinity of the entrance to New London Harbor using three point sextant fixes with check angles. The daily system checks or calibration correctors were computed using a HP 9815A computer S/N 1825A02388 and the Hydro Calibration Package program. These daily correctors and baseline calibration data are available in Appendix A.

The daily correctors for all calibrations conducted during 1983 were stable and within accuracy tolerances for a survey of this scale. Therefore, only the baseline calibration data should be applied to the raw position data during final processing and smooth plotting of this data. -Concur

During 1984 operations, Del Norte failures required switching DMU/MASTER pairs on the HECK according to the following scenario. On JD 290, DMU/MASTER 142/3033 was used. On JD's 296-298, 145/3014 was used and on JD 300, 142/3014 was used. Accordingly, only open baseline calibration data is available for combinations 142/3033 and 145/3014. Combination 142/3014, used on JD 300, only had a closing baseline calibration conducted on JD 303. However, all units had daily calibration checks conducted prior to and after survey operations, when the systems were operational. Since these daily checks were all well within acceptable standards, only available baseline calibration data should be applied during final processing of 1984 data. -Concur

H. Dates of Survey

This survey was begun on 26 October, 1983, (JD 299) and was completed on 26 October, 1984, (JD 300).

I. Reduction and Processing of Data

All side scan sonar data was initially recorded in NOAA Form 77-44, Sounding Volumes. All header data, position numbers, time, and position control data were recorded in the appropriate columns in the volumes. The remarks column was used to record all line information, vessel rpms, length of tow cable (measured from the waterline to the towfish), vessel heading, and any other unusual or noteworthy remarks. The towfish layback was computed by adding the amount of tow cable out the stern plus the stern to antenna distance.

Position data from the side scan sonar work was entered in the Digital PDP 11/34 computer with a modified version of the R/H Double Precision Wire-Drag program. Rates for just one vessel were entered in this program and a single vessel position plot was then generated with the Houston Instruments roll-bed plotter. All side scan sonar work for this survey was plotted in this manner. The 1983/84 versions of the Rude and Heck wire drag programs were used to plot all data on this field sheet.

Side scan sonar coverage was computed and listed on the Side Scan Sonar Coverage Abstract, see Appendix L. The required 100% side scan sonar coverage was obtained within all areas of the corridor.

The sonargrams from the side scan sonar work were examined while on line and then again at the end of the day. All notable contacts were flagged during each examination. These flagged contacts were then logged in the Side Scan Sonar Target Abstract for that field sheet. The Target Abstract was then completed and the contacts were plotted on the smooth sheet containing the vessel position plots. The towfish layback was computed by adding the length of towcable out the stern plus the stern to antenna distance (21.3m). However, it should be noted that this layback value is an estimated value used for plotting purposes only. Since a K-Wing depressor was used, the actual layback was somewhat less than the value used, which was computed by adding the antenna to stern distance plus the towcable length. The layback and range to target values from this list were the distances used to plot the contact positions. All values of towcable length on the sonargram and in the soundings volumes refer only to the amount of cable out from the waterline to the towfish. The Side Scan Sonar Target Lists were then compiled from the Target Abstracts and the contact plots. The Del Norte rates of the contact positions were determined using a grid and arc overlay. These rates were then used to determine the latitude and longitude of the contact with the HP 9815A computer and the Geodetic Package program.

J. Junctions and Splits

FE-268 WD

FE-2645S This survey junctions to the west with contemporary survey R/H 20-14-83/84 and to the east with contemporary survey R/H 20-16-84. There is adequate overlap with both surveys R/H 20-14-83/84 and R/H 20-16-84. — See the Evaluation Report, section 5.

FE-268WD FE-2645S

K. Comparison with Prior Surveys

All R/H 20-15-83/84 side scan sonar and wire-drag records were compared to prior surveys H-9212, H-8709, and H-8926. In general, the sonar records, sounding records and wire-drag clearance data from this survey compare favorably with these prior surveys.

In particular, the two significant peaks on the prior survey H-9212 at 41°-13'-50" N, 072°-06'-55" W and 41°-14'-05" N, 072°-06'-45" W are rather dramatically presented on the sonargram as contacts 34, 35, 38, 45 and 11, 22, 23, respectively.

also by Fathometer - position 510-511

There were several rocky areas and areas of boulders noted on the sonargrams that are not indicated on the prior surveys. One boulder field was noted covering a fairly large area from 41°-14'-00" N, 072°-03'-10" W to 41°-14'-45" N, 072°-03'-45" W, including contacts 2, 13, 14, and 16. The other rocky area was centered around 41°-13'-40" N, 072°-07'-40" W, in the vicinity of contacts 42-44. The entire area in the vicinity of Valiant Rock, 41°-13'-35" N, 072°-04'-04" W, is composed of numerous boulders as indicated on the prior survey. — These areas are portrayed on the "Area of Side Scan Sonar Coverage" chart section included at the end of this report.

L. Comparison With the Chart — See sections 6. & 7. of the Evaluation Report.

A comparison was made with NOS charts 12354, 13212, 12372, 13205, and 13209. The most comprehensive comparison was made with chart 13212, 29th Ed., Jan 1/83, since the chart is also 1:20,000 scale and covers a common area. In general, the soundings and sonar records from this survey compare well with the chart.

Regarding non-sounding features, the following chartings recommendations are offered:

1. Chart "Tide Rips" at 41-14-40 N, 072-03-10 W, and 41-13-50 N, 072-04-00 W. — Concur

2. Chart "Blds" at 41-14-25 N, 072-03-40 W; 41-13-42 N, 072-07-45 W; 41-14-35 N, 072-06-00 W; and 41-13-55 N, 072-04-00 W. — Concur

3. Chart "Rky" at 41-14-25 N, 072-02-45 W. — Concur

All floating aids to navigation were checked during the course of this survey. All aids are correctly charted and are suitable for the purpose for which they were intended.

In addition, the charted obstruction swept by wire drag to 23 feet, at 41-16-26 N, 072-02-39 W, was searched for during a sonar investigation on JD 294, 1983, but could not be located. It is recommended that a disproval investigation be conducted on this item when practical. — This obstruction is outside the survey area. No field records on this investigation were included with this survey and therefore no recommendations are made by the Evaluator.

As reported in the June 1984 Monthly Activities Report, the charted tank at Seaside, Conn., at 041-18'-13.034"N, 072-07'-57.667"W, has been dismantled and should be removed from all affected charts. A copy of the supporting chart section and form 76-40 has been included in Appendix J, Dangers to Navigation Report. All other presently charted landmarks in the proximity of this survey were visually verified from offshore and are adequate for charting. — SEASIDE SANITARIUM ELEVATED TANK, 1932.

The shoreline contained within the limits of this survey is from chart 13212, 29th Ed.. This shoreline is for orientation purposes only on the smooth field sheet. — See section 2. of the Evaluation Report.

M. Adequacy of Survey

All sections of the corridor on this survey were adequately covered by either side scan sonar or wire-drag operations. See sections L and N of this report for additional survey operation recommendations.

N. Incomplete Items

Targets 1, vicinity Valiant Rock, and 4, vicinity Race Rock, and target #3 (ridge), and the ridge east of Race Rock are the only contacts on this survey which would concern deep draft tanker traffic. However, given the proximity of both targets to marked and charted dangers, additional investigation of these items is not considered necessary.

An attempt was made to clear, by wire-drag methods, the two significant peaks located at 041-13'-50"N, 072-06'-55"W, and

Do not concur - additional investigation in the vicinity of Race Rock is recommended. Target #1 is consistant with prior data and future work on this target is not considered necessary. See the Evaluation Report.

041°-14'-05"N, 072°-06'-45"W, contacts 34, 35, 38, 45 and 11, 22, 23, respectively. Contacts 38, 11, 22, and 23 were cleared in two directions to an effective depth of 72 feet. However, the extreme currents in this area appeared to be influenced by these peaks, resulting in extremely confused seas and currents setting north and south of these features. Review of the sonar records, and the least depth computations on these contacts, indicated that although these are significant hydrographic features, there is in excess of 150 feet of water over these items. No additional work on these items is warranted. - Concur In addition, this is a very difficult area to wire drag, posing potential dangers to both equipment and personnel. - This area is well covered by prior surveys.

Contacts 8 and 16, in addition to the contacts identified above, should probably be further investigated during future hydrographic surveys. However, within the context of this survey with regard to clearing the tanker route, no further work is required. - These contacts pose no threat to surface navigation and do not warrant further investigation on this basis, however future hydrographic surveys of this area should investigate these targets.

O. Currents and Winds

In general, the times and strengths of maximum current and times of slack water agreed with the predicted times and strengths under normal conditions. However, this entire area is greatly influenced by the wind which results in nontidal currents which considerably prolong or reduce the tidal currents depending on wind direction and duration. See the previous section of this report for additional comments on currents.

P. Personnel

The officers participating in this survey were LCDR Donald D. Winter, LCDR Robert K. Norris, LT Neal G. Millett, LT Edward M. Clark, LT Joseph C. Talbott and ENS Thomas G. Callahan.

Q. General Notes

See the Coast Pilot Report and Loran-C comparisons for OPR-B660-RU/HE-83/84 and the Descriptive Report for OPR-B660-RU/HE-82 for additional information on this survey.

The format of this report is a composite of the Descriptive Report formats contained in the Wire Drag and Hydrographic Manuals. This format is the optimum composite of the pertinent sections of the two reports and is more applicable to the surveys currently being conducted by the Rude and Heck. - Concur

Charting recommendations: - See also sections 6. & 7. of the Evaluation Report.

1. Chart "Tide Rips" at 41°-14'-40"N, 072°-03'-10"W, and 41°-13'-50"N, 072°-04'-00"W. - Concur
2. Chart "Blds" at 41°-14'-25"N, 072°-03'-40"W; 41°-13'-42"N, 072°-07'-45"W; 41°-14'-35"N, 072°-06'-00"W; and 41°-13'-55"N, 072°-04'-00"W. - Concur
3. Chart "Rky" at 41°-14'-25"N, 072°-02'-45"W. - Concur

See section L for a complete chart comparison with this survey.

Respectfully submitted,

Neal G. Millett, LT., NOAA

ATLANTIC MARINE CENTER
Hydrographic Surveys Branch
439 West York Street
Norfolk, Virginia 23510

N/MOA2321:MBH

Vice Admiral Paul A. Yost, USCG
District Commander
Third Coast Guard District
Governors Island
New York, New York 10004

Dear Admiral Yost:

Indications of two (2) uncharted shoals and an obstruction were noted during the office processing of NOAA's wire drag and side scan sonar field examination FE-262 WD, New York, Long Island Sound, The Race. These shoals and obstructions are considered dangers to navigation. Questions concerning this survey may be directed to Mr. Maurice B. Hickson, III, Evaluation and Analysis Group, telephone (804) 441-6268 (FTS 827-6268).

The following text is recommended for inclusion in the Local Notice to Mariners:

"Uncharted shoaling in the form of a ridge extending from Race Rock south into The Race has been reported. Reported depths on this ridge are:

Thirty-two (32) feet at Mean Low Water in Latitude 41°14'31.0"N, Longitude 72°02'52.5"W. Fifty-four (54) feet at Mean Low Water in Latitude 41°14'28.5"N, Longitude 72°02'56.3"W. Seventy-seven (77) feet at Mean Low Water in Latitude 41°14'24.8"N, Longitude 72°02'48.9"W."

"Uncharted shoaling in the form of a ridge oriented north-south located approximately three hundred-fifty (350) meters east of Race Rock and extending into The Race has been reported. Reported depths on this ridge are:

Forty (40) feet at Mean Low Water in Latitude 40°14'32.7"N, Longitude 72°02'37.0"W. Fifty-five (55) feet at Mean Low Water in Latitude 41°14'29.3"N, Longitude 72°02'37.0"W."

"An uncharted obstruction extending approximately twelve and one-half (12½) feet off the bottom with a reported depth of twenty-five (25) feet at Mean Low Water has been reported in Latitude 41°14'30.0"N, Longitude 72°02'55.1"W."

```
3^W!x^^P;G

INVALID COMMAND "Y". (LOGO$CP)
LOGIN PLEASE.
ER! LOGIN NMS

ANMS (USER 14) LOGGED IN WEDNESDAY, 03 JUL 85 19:56:28.
WELCOME TO PRIMOS VERSION 19.3.7.
LAST LOGIN WEDNESDAY, 03 JUL 85 19:48:48.
(1 OTHER USER UNDER THIS ID.)

ENTER USER ID: KVH

WED, JUL 03 1985
WELCOME TO THE AUTOMATED NOTICE TO MARINERS

OK, SEG #ANMS

- THE CURRENT NOTICE NUMBER IS 29/85 -

ENTER SELECTION NUMBER OR 98 TO DISPLAY SELECTIONS
10
THIS IS THE ANM SYSTEM MAILBOX
ENTER CODE OR PERSON MESSAGE IS FOR (20 CHAR MAX)
DMA/HTC
ENTER NAME OR ORGIN OF MESSAGE (20 CHAR MAX)
N/MOA2X1 (RLP)
ENTER REFERENCE, IF ANY OR RETURN (50 CHAR MAX)


ENTER MESSAGE TEXT (69 CHARACTERS PER LINE)
BELOW THE LAST LINE OF YOUR MESSAGE
   ENTER THE WORDS:   MESSAGE STOP

THE THREE (3) DANGERS TO NAVIGATION REFERRED TO IN MESSAGE
NUMBER 85-000905 AFFECT THE FOLLOWING NOAA CHARTS:
12372 SC, 13205,13209,AND 13212.

MESSAGE STOP

MESSAGE ENTERED IN THE SYSTEM MAILBOX
SYSTEM ASSIGNED MESSAGE NUMBER 85-000906
NO TREE NAME...
YOUR SPOOL FILE IS PRNT01

ENTER:    SELECTION NUMBER
          98   TO DISPLAY SELECTIONS
          99   TO TERMINATE PROGRAM
99

ANMS (USER 14) LOGGED OUT WEDNESDAY, 03 JUL 85 19:59:52.
TIME USED: 00H 03M CONNECT, 00M 05S CPU, 00M 04S I/O.
```

Charts affected are 12372 SC, 13205, 13209, and 13212.

A teletype message of these dangers has been sent to DMAHTC, Washington, D. C. (NVS).

Sincerely,

Wesley V. Hull
RADM, NOAA
Director, Atlantic Marine Center

CC:
N/CG222

ANMS (USER 14) LOGGED IN WEDNESDAY, 03 JUL 85 19:21:12.
WELCOME TO PRIMOS VERSION 19.3.7.
LAST LOGIN WEDNESDAY, 03 JUL 85 18:54:32.

ENTER USER ID: KVH

WED, JUL 03 1985
WELCOME TO THE AUTOMATED NOTICE TO MARINERS

OK, SEG #ANMS

- THE CURRENT NOTICE NUMBER IS 29/85 -

ENTER SELECTION NUMBER OR 98 TO DISPLAY SELECTIONS
0
THIS IS THE ANM SYSTEM MAILBOX
ENTER CODE OR PERSON MESSAGE IS FOR (20 CHAR MAX)
DMA/HTC
ENTER NAME OR ORGIN OF MESSAGE (20 CHAR MAX)
N/MOA2X1(LP)
ENTER REFERENCE, IF ANY OR RETURN (50 CHAR MAX)
MOA 2321 MMO DATED JULY

ENTER MESSAGE TEXT (69 CHARACTERS PER LINE)
BELOW THE LAST LINE OF YOUR MESSAGE
   ENTER THE WORDS: MESSAGE STOP

THE FOLLOWING DANGRS TO NAVIGATON WERE DISCOVRED DURING
OFFICE POCESSING OF AN NOS SURVEY. THE GENERAL AREA
OF HE DANGERS IS THE ACE??
OF THE DANGERS IS THE RACE, LONG ISLAND SOUND, NEW YORK.

1. UNCHARTED SHOALING IN THE FORM OF A RIDGE EXTENDING FROM
RACE ROCK SOUTH INTO THE RACE. DEPTHS ON THIS RIDGE ARE:
THIRTY TWO (32) FEET AT MLW AT LAT 41-14-31.0 N, LONG
72-02-52.5 W. FIFTY FOUR (54) FEET AT MLW AT LAT 41-14-28.5N,
LONG 72-02-56.3 W. SEVNTY SEVEN (77) FEET AT MLW AT LAT
41-14-24.8 N, LONG 72-02-48.9 W.

2. UNCHARTED SHOALING IN HE FORM OF A RIDGE ORIENTED NORTH-
SOUH AND LOCATED APPOXIMATELY THREE HUNDRED FIFTY (350) METRS
EAST OF RACE ROCK AND EXTENDING INTO THE RACE. DEPTHS ON THS
RIDGE ARE: FORTY (40) FEET AT MLW AT AT 0-14-32.7 N, LONG
72-02-37.0 W. FIFT FIVE (55) FEET AT MLW AT LAT 41-14-29.3,
LONG 72-02-37.0 W.

3. AN UNCHARTED OBSTRUCTION EXTNDING APPROXIATELY TWELVE AND
ONE ALF (12.5) FEET OFF HE BOTTOM WITH A REPORTED DEPTH OF
TWENTY FIVE (25) FEET AT MLW AT AT 41-14-0.0 N, LONG 72-02-55.1 W.
//
??
POSITION AGAIN IS: LAT 41-14-30.0 N, LONG 72-02-55.1 W.

LATITUDE FR ??
LATITUDE FOR 40 FOOT DEPH ??

LATITUDE FOR 40 FOOT DEPTH IN DANGER NO. 2 IS 40-14-32.7 N.

THIS INFORMATION HAS BEEN FORWARDED TO THE THIRD .. C.G. DISTRICT
IN NEW YORK.

MESSAG STOP

MESSAGE ENTERED IN THE SYSTEM MAILBOX
SYSTEM ASSIGNED MESSAGE NUMBER 85-000905
NO TREE NAME...
YOUR SPOOL FILE IS PRNT01

APPROVAL SHEET

R/H 20-15-83/84

Field operations contributing to the accomplishment of this survey were conducted under my supervision with frequent personal checks of progress and adequacy. This report and field sheets have been closely reviewed and are considered complete and adequate for charting. See also the Evaluation Report.

Robert K. Norris

Robert K. Norris

LCDR., NOAA

Commanding Officer

NOAA Ships RUDE & HECK

C. HORIZONTAL CONTROL

No new stations were established for this survey. See Appendix D, Signal List, for a complete listing of all stations used on this survey.

D. SIGNAL LIST

PROJECT:

OPR-B660-RD/HE-84

SIGNALS/STATIONS

TOWER (1972)

ID NBR 1
LAT 411520.647
LON 720935.153
ELEV'N 49.00 M

FILE 1

WATCH HILL LTHSE. (1873)

ID NBR 2
LAT 411813.646
LON 715132.552
ELEV'N 18.60 M

FILE 2

BARTLETT REEF LT. (1954)

ID NBR 3
LAT 411627.924"
LON 720815.740"

FILE 3

NEW LONDON HARBOR LIGHTHOUSE (1835)

ID NBR 4
LAT 411859.489"
LON 720524.855"

FILE 4

NEW LONDON LEDGE LIGHTHOUSE (1932)

ID NBR 5
LAT 411820.795"
LON 720440.513"
ELEV'N 17.70 M

FILE 5

SEAFLOWER REEF LT. (1954)

ID NBR 6
LAT 411745.245"
LON 720201.462"

FILE 6

NORTH DUMPLING LTHSE. (1874)

ID NBR 7
LAT 411715.938"
LON 720111.084"

FILE 7

LATIMER REEF LTHSE. (1886)

ID NBR 8
LAT 411815.871
LON 715601.684

FILE 8

RACE ROCK LTHSE. (1882)

ID NBR 9
LAT 411435.152"
LON 720251.414"

FILE 9

LITTLE GULL ISLAND LTHSE. (1874)

ID NBR 10
LAT 411222.673
LON 720628.278

FILE 10

FISHERS IS. CG CUPOLA (1934)

ID NBR 11
LAT 411658.787
LON 715641.848

FILE 11

SAYBROOK LTHSE. (1861)

ID NBR 12
LAT 411616.894"
LON 722037.019"
ELEV'N 21.60 M

FILE 12

3

Seaside Sanitarium
Elev. Tank (1932) ✓

ID NBR 19
LAT 41°18'13.034" ✓
LON 72°07'57.667" ✓
FILE 19

(USED DURING 1983, Dismantled prior to 1984 Field Season)

~~Bartlett Reef Lt.~~

~~ID NBR 20~~
~~LAT 411627.924~~
~~LON 720815.740~~
~~FILE 20~~

(Listed on previous page)

~~Seaflower Reef Lt.~~

~~ID NBR 21~~
~~LAT 411745.245~~
~~LON 720201.462~~
~~FILE 21~~

E. PNEUMO DEPTH GAGE CALIBRATIONS

NEGATIVE REPORT

F. DIVING REPORTS

NEGATIVE REPORT

H. LOCAL NOTICE TO MARINERS REPORT

✓

NEGATIVE REPORT

A Notice to Mariners will be generated by A.M.C. noting the two uncharted ridges in the vicinity of Race Rock and Target #4.

J. DANGERS TO NAVIGATION REPORT

See the aforementioned note on Appendix H. - Local Notice to Mariners Report

NOAA FORM 76-40
(8-74)

Replaces C&GS Form 567.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [ ] TO BE REVISED
- [X] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
RUDE/HECK	Conn.	Approaches to New London	12/84

The following objects HAVE [ ] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
OPR-B660		FE-262 WD R/H 20-15-83/84	NA 1927

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′ ″	POSITION LONGITUDE ° ′ ″	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	METHOD AND DATE OF LOCATION FIELD	CHARTS AFFECTED
TANK	Tank dismantled prior to 1984 field season. (Seaside Sanitarium Elev. Tank, 1932)	41-18- 13.034	72-07 57.667	Published by N.G.S.		13212, 13205, 12354, 12372, 13211.
	Sec L-851(84)					

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RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	R. K. Norris, LCDR., NOAA	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED		FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

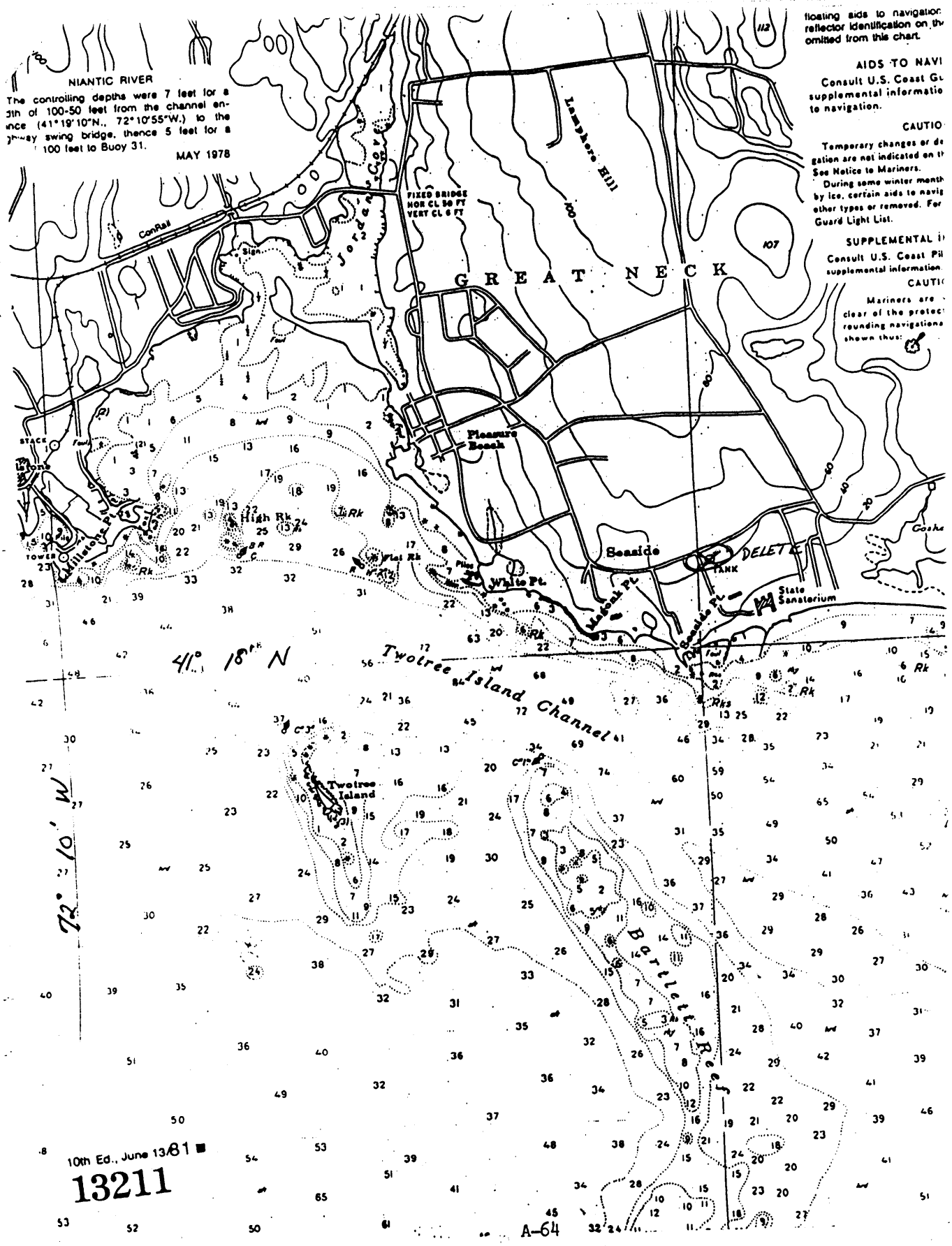
III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U. S. GPO:1975-0-665-080/1155


NIANTIC RIVER
The controlling depths were 7 feet for a
3th of 100-50 feet from the channel en-
nce (41°19'10"N., 72°10'55"W.) to the
-way swing bridge, thence 5 feet for a
100 feet to Buoy 31.
MAY 1978
floating aids to navigation
reflector identification on th
omitted from this chart.
AIDS TO NAVI
Consult U.S. Coast Gu
supplemental informatio
to navigation.
CAUTIO
Temporary changes or de
gation are not indicated on th
See Notice to Mariners.
During some winter month
by ice, certain aids to navig
other types or removed. For
Guard Light List.
SUPPLEMENTAL I
Consult U.S. Coast Pil
supplemental information.
CAUTI
Mariners are
clear of the protec
rounding navigationa
shown thus:
FIXED BRIDGE
HOR CL 50 FT
VERT CL 6 FT
ConRail
Sign
Jordan Cove
Lamphere Hill
GREAT NECK
Pleasure Beach
Seaside
White Pt.
Seaside Pl.
State Sanatorium
TANK
DELETE
Flat Rk
High Rk
Twotree Island Channel
Twotree Island
Battelle Reef
41° 18' N
72° 10' W
10th Ed., June 13/81
13211
A-64

L. SIDE SCAN SONAR COVERAGE ABSTRACT - TARGET ABSTRACT - TARGET LIST

Sonar Coverage Abstract OPR-B660-RU/HE-83 Field No. RH 20-15-83

Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Maximum Track Spacing (m)	Coverage Analysis
119-107	200m	42 m	200m	37-28	200m	19	188 m	325	100%
108-104		13	129	169-161		12	119	290	
169-161		12	119	28-24		19	188	175	100%
37-25		19	188	76-59		24	200	310	100%
25-20		6	59	19-13		16	158	300	<100% 100% with split 582-587
76-58		24	200	57-43		38	200	310	100%
18-13		16	158	43-38		33	200	280	100%
57-38		33	200	77-103		28	200	375	100%
77-103		28	200	141-120		27	200	300	100%
141-128		27	200	552-539		20	198	250	100%
128-125		39	200	12-08		27	200	200	100%
126-120	200m	30	200	581-572	200m	32	200	260	100%

Sonar Coverage Abstract OPR-B660-RU/HE-83 Item No. R/H 20-15-83

Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Search Track Number	Range Scale (m)	Minimum Towfish Height (m)	Minimum Effective Scanning Range (m)	Maximum Track Spacing (m)	Coverage Analysis
552-539	200m	20m	198	518-538	200m	22m	200m	375m	100%
521-536		35	200	144-151		30	200	280	100%
518-521		49	200	517-515		45	200	300	100%
144-151		30	200	515-504		18	178	240	100%
01-04		24	200	504-501		20	200	270	100%
12-08		27	200	02-07		12	119	310	100%
581-579		32	200	561-563		57	200	300	100%
579-572		32	200	159-153		30	200	325	100%
159-153		30	200	563-571		36	200	240	100%
561-571	200m	36	200	560-553	200m	27	200	280	100%

SIDE SCAN TARGET ABSTRACT

DATE _____ OPR- B660-Ru/He-83 ITEM # _____

J.D. _____ R_1 SAYBROOK LIGHTHOUSE R/H 20-15-83 SHIP _____

R_2 NEW LONDON LEDGE LIGHTHOUSE LEAST

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	~~REDUCED~~ DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
1	299	04-05	R_1 23700 R_2 8370		9.1	87.1	94	17.0	63.0	64.0	73.0	2.1	61.2	1.0	30.4
2	299	08	R_1 24660 R_2 8380		9.1	311.2	320	79.5	99.0	102.0	106.0	3.0	62.8	4.6	30.4
3	299	17-18			9.1			Position Plot of Ridge							30.4
4	299	24-25	R_1 24940 R_2 7540		6.1	32.5	45	8.0	8.5	9.5	18.0	3.8	7.4	1.1	27.4
5	299	30-31	R_1 21315 R_2 7185		30.5		246	Depth of spike from fotho.							51.8
6	299	31-32	R_1 20710 R_2 7420		30.5	260.3	277	63.5	135.0	138.0	150.0	5.1	121.7	3.3	51.8
7	299	32-33	R_1 19820 R_2 7630		30.5	205.6	222	52.0	65.0	65.5	72.5	5.0	44.9	0.7	51.8
8	299	46-47	R_1 22250 R_2 7600		30.5	173.3	194	66.0	104.5	105.0	116.0	6.3	85.7	0.6	51.8
9	299	67-68	R_1 20810 R_2 7525		30.5	238.9	255	67.0	89.0	88.0	95.0	4.9	61.0	1.4	51.8
10	299	73			30.5			Object in water column			*	—			51.8
11	300	82-83	R_1 19800 R_2 8300		30.5	210.5	223	65.0	93.0	96.0	102.0	3.8	70.0	3.9	51.8
12	300	89-90	R_1 22840 R_2 7620		30.5	214.4	237	53.0	120.0	126.0	145.0	6.9	110.8	6.5	51.8
13	300	92-93	R_1 24025 R_2 7880		30.5	204.8	216	50.0	93.0	95.0	102.0	3.4	60.5	2.3	51.8
14	300	93-94	R_1 24270 R_2 7800		30.5	197.9	211	51.0	114.0	116.0	126.0	4.0	103.9	2.2	51.8
15	300	103	R_1 27860 R_2 9200		30.5	135.7	141	21.0	53.0	54.0	58.5	1.6	49.3	1.1	51.8

See the following Side Scan Sonar Target List.

* No shadow observed on sonargram. No height computation.

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SIDE SCAN TARGET ABSTRACT

DATE _____ OPR- B660-R/H-83 ITEM # _____

R/H 20-15-83

J.D. _____ SHIP _____

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	~~REDUCED~~ LEAST DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/FT)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/FT)	TOWFISH LAYBACK (M)
16	300	105-106	R1 23700 R2 6840		21.3	123.4	150	35.0	68.0	71.0	92.5	8.1	62.5	3.2	42.6
17	300	124-125	R1 R2		30.5			72.0	71.0	72.5	85.0	Object in water column			51.8
18	300	129	R1 22525 R2 7860		30.5	156.8	164	32.0	93.5	96.0	103.0	2.2	88.6	2.6	51.8
19	300	133-134	R1 20775 R2 8300		30.5	273.4	298	78.0	120.0	123.0	136.0	7.5	97.1	3.7	51.8
20	300	133-134	R1 20580 R2 8300		30.5	317.2	328	83.0	94.5	96.0	100.0	3.3	50.8	2.7	51.8
21	300	134-135	R1 20360 R2 8460		30.5	314.5	326	78.0	176.0	177.0	182.5	2.3	158.9	1.1	51.8
22	300	135-136	R1 19790 R2 8520		30.5	213.6	231	62.0	94.5	96.0	105.0	5.3	75.6	1.9	51.8
23	300	135-136	R1 19730 R2 8415		30.5	141.0	223	60.0	65.0	67.0	115.0	25.0	54.8	2.4	51.8
24	300	137-138	R1 18980 R2 8895		30.5	290.9	305	79.5	120.0	121.0	128.0	4.3	93.5	1.3	51.8
25	300	138-139	R1 18475 R2 9150		30.5	274.5	284	68.5	101.5	102.0	106.5	2.9	77.4	0.6	51.8
26	300	502-503	R1 R2		38.1		99	Bottom Plot-Boulder Field							59.4
27	300	507-508	R1 21100 R2 8010		38.1	317.1	326	70.0	131.0	134.5	140.0	2.7	112.4	4.1	59.4
28	300	507-508	R1 20990 R2 9025		38.1	297.1	326	78.0	125.0	126.0	142.0	8.8	104.1	1.2	59.4
29	300	507-508	R1 20960 R2 9070		38.1	304.7	326	82.0	167.0	168.5	182.0	6.5	149.0	1.7	59.4
30	300	507-508	R1 20900 R2 8800		38.1	249.8	281	83.0	141.0	142.5	161.0	9.5	120.0	1.7	59.4

See the following Side Scan Sonar Target List.

SIDE SCAN TARGET ABSTRACT

DATE_____

J.D._____

OPR- H660-RA/He-83
R/V 20-15-83

ITEM #_____

SHIP _____

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	~~REDUCED~~ LEAST DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
31	300	511-512	R1 19300 R2 9520		38.1	216.6	231	75.0	128.5	129.0	137.0	4.4	107.3	0.6	59.4
32	300	515-516	R1 17760 R2 10050		38.1	200.4	207	47.0	130.0	132.5	138.0	1.9	121.9	2.7	59.4
33	300	520-521	R1 17760 R2 10050		38.1		207	53.0	142.0	141.0	150.0	2.1	132.6	2.1	59.4
34	300	527-528	R1 19640 R2 8980		38.1	165' ①	160	Depth from Fathо.							59.4
35	300	527-528	R1 19740 R2 8950		38.1	165' ①	160	Depth from Fathо.							59.4
36	300	536-537	R1 22625 R2 8450		38.1		167	36.0	99.0	101.0	*	—	93.0	2.1	59.4
37	300	536-537	R1 22560 R2 8275		38.1	161.1	167	34.5	91.0	93.0	98.0	1.8	84.9	2.1	59.4
38	300	547-548	R1 19485 R2 8809		38.1		192	Depth from Fathо. - 205'+ No trace on Fathо. - off scale							59.4
39	300	563-564	R1 25100 R2 8570		38.1	175.5	187	75.0	141.0	143.0	150.0	3.5	121.5	2.3	59.4
40	300	578-579	R1 25235 R2 8500		38.5	278.0	297	74.0	138.0	141.0	153.0	5.8	120.0	3.4	59.4
41	311	154-155	R1 R2					Hole in sea bottom							
42	308	145-146	R1 18600 R2 9575		30.5	194.2	209	43.0	50.0	51.0	57.0	4.5	31.9	1.5	51.8
43	308	145-146	R1 18730 R2 9600'		30.5	213.1	222	50.0	67.5	69.0	73.0	2.7	48.2	2.1	51.8
44	308	145-146	R1 18820 R2 9625		30.5		248	55.0	123.0	129.0	*	—	110.0	6.7	51.8
45	308	147	R1 19745 R2 9035		30.5	153' ①	150 ~~129~~	see Depth From Fathо							51.8

① Predicted Tide Reduction Not Available to be applied.

*No shadow observed on sonargram. No height computation.

See the following Side Scan Sonar Target List

SIDE SCAN TARGET ABSTRACT

DATE_____ OPR-B660-Ruth-83 ITEM #_____

J.D._____ R/H 20-15-83 SHIP _____

TARGET NUMBER	J.D. TIME UCT	FIX #	COMPUTED RATES	TOW SPEED	LENGTH OF TOW (M)	~~REDUCED~~ LEAST DEPTH (FT)	CHARTED DEPTH (FT)	HEIGHT OF FISH R1 (M)	R2 (M)	R3 (M)	R4 (M)	HEIGHT OF TARGET (M/~~FT~~)	RANGE OF TARGET (M)	WIDTH OF TARGET (M/~~FT~~)	TOWFISH LAYBACK (M)
46	308	148	R. 20330 R_2 8820		30.5	291①	332	Depth from Fathe.							51.8
47	308	148-149	R. 20880 R_2 8750		30.5	262.0	281	80.0	95.0	96.5	104.0	5.8	59.3	2.4	51.8

① Predicted Tide Reducer Not Available To Be Applied

See the following Side Scan Sonar Target List.

OPR-B660-RU/HE-83

SHEET R/H 20-15-83

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	LEAST ~~REDUCED~~ DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
1	94	87.1	6.9	3.3	φ 041-13-51.4 λ 072-03-57.5				Investigate during future hydrographic project
2	320	311.2	9.8	15.1	φ 041-13-57.1 λ 072-03-14.2				No additonal work recom.
3		POSITION PLOT OF RIDGE-Differs			φ λ from what is shown on the fathograms - See the Evaluation Report, sections 6.&7.				" " " "
4	45	32.5	12.5	3.6	φ 041-14-29.7 λ 072-02-55.2				Investigate during future hydrographic project
5	246	Noted as a spike - no fathogram trace - shows a peak on Side Scan with a possible least depth			φ 041-14-31.2 λ 072-05-32.2			of approximately 209' in prior depths of 250'	No additional work recom.
6	277	260.3	16.7	10.8	φ 041-14-27.7 λ 072-05-59.3				" " " "
7	222	205.6	16.4	2.3	φ 041-14-29.8 λ 072-06-37.6				" " " "
8	194	173.3	20.7	2.0	φ 041-14-14.7 λ 072-04-55.1				Investigate during future hydrographic project
9	255	238.9	16.1	4.6	φ 041-14-28.6 λ 072-05-55.9				No additional work recom.
10	Object in water column				φ λ				" " " "
11	223	210.5	12.5	12.8	φ 041-14-08.3 λ 072-06-43.8	W.D.	10/84	Cleared to 72 FT	
12	237	214.4	22.6	21.3	φ 041-14-13.9 λ 072-04-29.6				No additional work recom.
13	216	204.8	11.2	7.5	φ 041-14-09.6 λ 072-03-39.0				" " " "
14	211	197.9	13.1	7.2	φ 041-14-14.1 λ 072-03-27.3				" " " "
15	141	135.7	5.3	3.6	φ 041-14-18.1 λ 072-00-50.7				" " " "
16	150	123.4	26.6	10.5	φ 041-14-42.8 λ 072-03-46.6				Investigate during future hydrographic project
17	Object in water column				φ λ				

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OPR-B660-RU/HE-83

SHEET R/H 20-15-83

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	LEAST ~~REDUCED~~ DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
18	164	156.8	7.2	8.5	φ 041-14-06.0 λ 072-04-45.2				No additional work recom.
19	298	273.4	24.6	12.1	φ 041-13-59.1 λ 072-06-03.6	W.D.	10/84	Cleared to 72 FT	
20	328	317.2	10.8	8.9	φ 041-14-00.7 λ 072-06-11.7	W.D.	10/84	Cleared to 72 FT	
21	326	314.5	7.5	3.6	φ 041-13-57.5 λ 072-06-22.2	W.D.	10/84	Cleared to	72 FT
22	231	213.6	17.4	6.2	φ 041-14-01.2 λ 072-06-46.2	W.D.	10/84	Cleared to 72 FT	
23	223	141.0	82.0	7.9	φ 041-14-05.4 λ 072-06-47.7	W.D.	10/84	Cleared to 72 FT	
24	305	290.9	14.1	4.3	φ 041-13-59.6 λ 072-07-22.4	W.D.	10/84	Cleared to	
25	284	274.5	9.5	2.0	φ 041-13-58.8 λ 072-07-44.9	W.D.	10/84	72 FT	
26	99	POSITION	PLOT BOULDER FIELD		φ λ Least depth by fathometer = 79' (velocity not applied)				prior depth is 81' (H-8709) No additional work recom.
27	326	317.1	8.9	13.5	φ 041-13-34.4 λ 072-05-56.7				" " " "
28	326	297.1	28.9	3.9	φ 041-13-34.7 λ 072-06-01.5				" " " "
29	326	304.7	21.3	5.6	φ 041-13-33.6 λ 072-06-03.6				" " " "
30	281	249.8	31.2	5.6	φ 041-13-42.4 λ 072-06-03.0				" " " "
31	231	216.6	14.4	2.0	φ 041-13-35.4 λ 072-07-16.2				" " " "
32,33	207	200.4	6.6	7.9	φ 041-13-41.4 λ 072-08-22.6				" " " "
34	160	Uncorrected fatho. depth 165'			φ 041-13-48.4 λ 072-06-56.7				Investigate during future hydrographic project
35	160	Uncorrected fatho. depth 165'			φ 041-13-48.3 λ 072-06-52.4				" " " "

A-89

OPR-~~B660-RU/HE-83~~

SHEET R/A 28-15-83

SIDE SCAN SONAR TARGET LIST

TARGET NUMBER	CHARTED DEPTH (FT)	~~REDUCED~~ LEAST DEPTH (FT)	HEIGHT OF TARGET (FT)	WIDTH OF TARGET (FT)	POSITION	FURTHER INVESTIGATION TYPE	DATE	RESULTS	REMARKS
36	167	Not able to composite height-group of rocks or small blds. in 161' depths	—	6.9	φ 041-13-46.9 λ 072-04-45.8				No additional work recom.
37	167	161.1	5.9	6.9	φ 041-13-52.6 λ 072-04-41.1				" " " "
38	192	approximately 200'			φ 041-13-55.8 λ 072-07-01.4	W.D.	10/84	Cleared to 72 FT	
39	187	175.5	11.5	7.5	φ 041-13-54.5 λ 072-02-53.6				No additional work recom.
40	297	278.0	19.0	11.2	φ 041-13-58.5 λ 072-02-48.8				" " " "
41		Hole in Sea bottom			φ λ				" " " "
42	209	194.2	14.8	4.9	φ 041-13-43.2 λ 072-07-44.5				" " " "
43	222	213.1	8.9	6.9	φ 041-13-40.5 λ 072-07-39.7				" " " "
44	248	No shadow, therefore no height. Target in 253' depths		22.0	φ 041-13-38.4 λ 072-07-36.4				" " " "
45	129	Uncorrected fatho. depth 154'			φ 041-13-45.5 λ 072-06-53.0				Investigate during future hydrographic project
46	332	Uncorrected fatho. depth 292'			φ 041-13-46.4 λ 072-06-26.9				No additional work recom.
47	281	262.0	19.0	7.9	φ 041-13-44.1 λ 072-06-03.4				" " " "

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SHEET

Date: 04/26/85

Marine Center: Atlantic

OPR: B 660

Chart Evaluation Survey: FE-262, WD R/H-20-15-83/84

Locality: Long Island Sound Entrance

Time Period: October 1 - December 31, 1983

Tide Station Used: 846-1490 New London, CT

Plane of Reference (Mean Low Water): 3.54 ft.

Height of Mean High Water Above Plane of Reference: 2.6 ft.

Remarks: Recommended Zoning:

1) Southeast of a line formed by two points located at latitude 41°12.4' and longitude 72°06.4' and latitude 41°15.0' and longitude 72°02.4' apply -15 minute time correction and x0.89 range ratio to all heights.

2) Northwest of the previous line, zone direct.

James R. Hubbard
Chief, Tidal Datums Section

DATE: 12/19/84

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SHEET

Marine Center: Atlantic

OPR: B660

Hydrographic Sheet: R/H 20-15-84, FE-262WD

Locality: Long Island Sound Entrance

Time Period: October 16-26, 1984

Tide Station Used: 846-1490 New London, CT

Plane of Reference (Mean ~~Lower~~ Low Water): 3.54 ft

Height of Mean High Water Above Plane of Reference: 2.6 ft

Remarks: Recommended Zoning;

1) Southeast of a line formed by two points located at latitude 41° 12.4' longitude 72° 06.4' and latitude 41° 15.0' longitude 72° 02.4', apply a -15 minute time correction and x 0.89 range ratio to all heights.

2) northwest of the previous line zone direct.

James R. Hubbard
Chief, Tidal Datums Section

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

SURVEY NUMBER

FE-262 WD

GEOGRAPHIC NAMES

Name on Survey	A ON CHART NO. 13212	B ON PREVIOUS SURVEY NO.	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E ON LOCAL MAPS	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
LONG ISLAND SOUND (title)	✓									1
NEW YORK (title)	✓									2
THE RACE (title)	✓									3
RACE ROCK	✓									4
VALIANT ROCK	✓									5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
					Approved:					18
										19
					Chas. E. Harrington					20
					Chief Geographer - NOAA					21
										22
					JN 20 [illegible]					23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 61-29 (12-71)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REFERENCE NO.
MOA23-75-85

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):

☐ ORDINARY MAIL ☐ AIR MAIL
☒ REGISTERED MAIL ☐ EXPRESS
☐ GBL (Give number) _____

TO:

CHIEF, DATA CONTROL SECTION
HYDROGRAPHIC SURVEYS BRANCH, N/CG243
NATIONAL OCEAN SERVICE, NOAA
ROCKVILLE, MD 20852

DATE FORWARDED
July 3, 1985

NUMBER OF PACKAGES
Two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

FE-262 WD R/H-20-15-83/84 OPR-B660-RU/HE-83/84

New York, Long Island Sound, The Race

Package # 1 of 2 (Tube)

- 1 – Original Descriptive Report with one Smooth Sounding Sheet, one Smooth Wire Drag A & D Sheet, and one Smooth Wire Drag Position Overlay included.
- 1 – Final Field Sheet, containing all side-scan sonar contacts and coverage.
- 4 – Preliminary Field Sheets.
- 2 – Field Wire Drag Strip Plots.
- 6 – Office verified Wire Drag Strip Plots.

Package # 2 of 2 (Box)

- 2 – Accordian Folders containing Echograms and Field Data Printouts.
- 2 – Sounding Volumes
- 2 – Wire Drag Volumes
- 1 – Envelope containing Side-Scan Sonargrams
- 1 – Envelope containing Smooth Tide Data and Printouts
- 1 – Envelope containing Wire Drag Strip Printouts
- 1 – Envelope containing Data removed from the Descriptive Report.

FROM: (Signature)
Maurice B. Hickson III
for LCDR David B. MacFarland, Jr.

RECEIVED THE ABOVE
(Name, Division, Date)
Dwayne S. Clark
July 17, 1985
N/CG243
Rockville

Return receipted copy to:

ATLANTIC MARINE CENTER
HYDROGRAPHIC SURVEYS BRANCH (N/MOA23)
439 W. YORK STREET
NORFOLK, VIRGINIA 23510

NOAA FORM 61-29 SUPERSEDES FORM C&GS 413 WHICH MAY BE USED. ☆U.S.GPO:1980-0-665-115/1005

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: FE-262 WD

Number of positions	328
Number of soundings	N/A
Number of control stations	8

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	19	June 14, 1985
Verification of Field Data	32	June 18, 1985
Quality Control Checks	N/A	
Evaluation and Analysis	66	June 28, 1985
Final Inspection	4	June 27, 1985
TOTAL TIME	121	

Marine Center Approval — June 28, 1985

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: FE-262 WD FIELD NO.: R/H-20-15-83/84

New York, Long Island Sound, The Race

SURVEYED: October 26, 1983 through October 26, 1984

SCALE: 1:20,000
1:40,000-Wire Drag Smooth Plot

PROJECT NO.: OPR-B660-RU/HE-83 &
OPR-B660-RU/HE-84

SOUNDINGS: Raytheon DE-719B Fathometer, Raytheon DSF-6000N Fathometer, Klein Side-Scan Sonar, Wire Drag

CONTROL: Del Norte 520 (Range/Range)

Chief of Party.....D. D. Winter (1983)
R. K. Norris (1984)

Surveyed by.....N. G. Millett
.....E. M. Clark
.....J. C. Talbot
.....T. G. Callahan

1. INTRODUCTION

a. The purpose of this survey is to provide 100% side-scan sonar coverage over a portion of the Northville Industries Corporation oil tanker route and to provide wire drag clearances over contacts located by side-scan sonar which the hydrographer deems necessary to further investigate.

b. This survey is a side-scan sonar and wire drag survey. Raytheon DE-719B Fathometers (1983) and Raytheon DSF-6000N Fathometers (1984) were operated concurrently with side-scan sonar and wire drag, but the soundings are of reconnaissance value only as all necessary sounding correctors were not determined. No hydrography beyond reconnaissance hydrography was required. No field plots or any data tapes were made for this hydrography.

c. A standard smooth sheet (A&D) and accompanying position overlay were generated for the wire drag portion of this survey and are attached to this report. A smooth sheet containing six soundings was generated to show shoaler soundings in the vicinity of Race Rock than indicated on the prior surveys or the charts. No curves were drawn on this smooth sheet as inadequate information exists to delineate bottom configurations. No smooth plot was generated for the side-scan sonar portion of this survey since the final field sheet adequately displays the lines run and the contacts found. A chart section depicting the area insonified, the boulder fields found and the area described as rocky by the hydrographer is attached to this report.

d. Corrections and notes made by the Evaluator to the Descriptive Report are denoted in red ink.

2. CONTROL AND SHORELINE

a. The source of control is adequately discussed in section F. and Appendix D. of the Descriptive Report.

b. No shoreline was drawn on any of the smooth sheets. Charted shoreline is drawn on the final field sheet and the relationship of shoreline to the area surveyed is adequately shown on the attached chart section depicting the area of side-scan sonar coverage.

3. HYDROGRAPHY

The echo sounding hydrography collected on this survey are of reconnaissance value only. The soundings portrayed on the sounding smooth sheet are reconnaissance soundings and are considered unqualified soundings.

The side-scan sonar coverage is adequate and meets the requirements specified. See section 4.f., 4.h., and 6.a. of this report regarding the investigation of submerged ridges in the vicinity of Race Rock.

4. CONDITION OF SURVEY

The final field sheet, survey records, and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL and WIRE DRAG MANUAL with the following exceptions:

a. In general the Descriptive Report is well written.

b. Prior surveys common to the survey area which were identified in the Project Instructions were used for comparisons by the Hydrographer. The Project Instructions were deficient in that they did not list or require comparisons with prior surveys H-4008 WD (1917-18) and H-4008a WD (1917-18).

c. Lift computations and lift and tide applications to field data were not in accordance with the WIRE DRAG MANUAL. Lifts were recomputed during verification. Lifts and smooth tides were applied to the verified data in accordance with the WIRE DRAG MANUAL during verification.

d. Numerous gaps of data exist in the 1983 fathograms largely due to the inability of the Raytheon DE-719B to maintain a bottom trace in areas of deep bottom and very irregular bottom topography. Operator inexperience may have contributed somewhat in not being able to shift scales as rapidly as the bottom changed.

e. Side-scan sonar contact analysis differs somewhat between field and office computations. These differences are due to individual interpretation of the contacts, the aging of the sonargrams between field and office analysis, and the sonargram portrayal of the contacts due to the depths encountered and towfish height above the bottom in the

deep and irregular areas. These differences between field and office computational analysis are not significant in the context of this survey since all but four of the designated contacts have least computed depths greater than 100 feet.

f. The position of the ridge in the vicinity of Race Rock drawn on the final field sheet differs positionally from the portrayal of the peak of this ridge on the fathograms. Positioning of significant hydrographic features is more accurately achieved with the fathometer than the side-scan sonar with the former records permitting.

g. The geographic positions of four signals listed in Appendix D. of the Descriptive Report contained slight discrepancies and were corrected during verification.

h. No least depths on contacts were determined by conventional methods as required by section 7.12.3.1 of both the 1983 and 1984 Project Instructions. A number of contacts were cleared by wire drag as a conventional method to determine safe passage over the area. However, all but four (4) of the contacts are in water deeper than can be investigated by a diver and have computed least depths of over 100 feet, therefore, pose no threat to surface navigation. The remaining four (4) contacts (#1, #3, #4, and #26) are in an area of strong and dangerous currents which prohibit diving and wire drag. Contacts #1 and #26 agree reasonably well with prior hydrography and further investigation is not recommended.

A basic hydrographic development of contacts #3 and #4, particularly the ridges in the vicinity of Race Rock would have provided valuable data for charting. This was not a requirement in the Project Instructions, however, the chart is deficient in this area and the RUDE and HECK were vessels of opportunity. Additionally, the ridge east of Race Rock was not noted in this survey by the hydrographer.

5. JUNCTIONS

Adequate junctions exist with FE-268 WD (1983-84) to the west and FE-264 SS (1984) to the east. Adequate side-scan sonar overlap exists between the present survey and the aforementioned junctional surveys. The present survey wire drag areas are common to some of the junctional area of FE-268 WD (1983-84) and clear the junction survey contact #1 by 72 and 79 feet (opposing directions). FE-268 WD (1983-84) contact #1 is common to the present survey but was not detected since it is directly under a line and therefore the side-scan sonar did not detect it, and the fathogram for that line has a gap with no coverage over this contact. Contact #1 is not considered of any significance since its height is approximately 7.5 feet and it lies in depths of approximately 270 feet. Contacts #32 and #33 on the present survey are contacts #8 and #30 on FE-268 WD (1983-84). Present survey contacts #24, #25, #31, #32 & #33, #42, #43, and #44 were cleared in one direction by a field effective depth of 76 feet by wire drag on FE-268 WD (1983-84).

Adequate wire drag junctions exist between FE-268 WD (1983-84) and the present survey. This junction will be portrayed on FE-268 WD (1983-84) when it is processed.

Present survey contact #15 (PA) was noted in a turn after the line broke and is common to junctional survey FE-264 SS (1984). This contact was not detected by FE-264 SS (1984) and is not considered a significant contact since it has a computed target height of 5.3 feet and lies in depths of approximately 141 feet.

No contemporary surveys exist to the north or south of the present survey.

6. COMPARISON WITH PRIOR SURVEYS

a. Hydrographic Surveys

H-8709 (1961-62) 1:20,000
H-8926 (1966-68) 1:10,000
H-9212 (1971) 1:20,000

These prior surveys cover the entire area of the present survey and are the source for all charted hydrography except for two soundings within the common area which are a charted 265-foot sounding in Latitude 41°14'44.0"N, Longitude 72°05'46.5"W, and a charted 95-foot sounding in Latitude 41°14'32.0"N, Longitude 72°01'32.5"W, These two soundings fall exactly on soundings gathered by the prior surveys with the charted 265-foot sounding being where a prior sounding (H-9212) is 285 feet and the charted 95-foot sounding being where a prior sounding (H-8926) is 96 feet. It is suspected that these are compilation errors rather than soundings originating from other sources. No conflicts exist between prior hydrography and present wire drag effective depths.

Side-scan sonar contacts within the common area range from 5.3 feet to 31.2 feet above the bottom. Only four contacts (#1, #3, #4 and #26) have computed least depths shoaler than 100 feet.

Contact	Latitude	Longitude	Prior Survey Depth	Estimated Least Depth of Contact
#1	41°13'51.5"N	72°03'57.3"W	94'	87'
#3	41°14'24.8"N	72°02'48.9"W	124'	77'
#4	41°14'30.0"N	72°02'55.1"W	45'	25'
#26	41°13'42.6"N	72°04'26.2"W	81'	79'

Other than in the vicinity of Race Rock, adequate comparisons between prior hydrography and present reconnaissance hydrography are made by the hydrographer in section K. of the Descriptive Report.

In the vicinity of Race Rock, two ridges extend south into The Race which are not portrayed on the prior surveys. Five reconnaissance soundings were selected on the peaks of these ridges and are plotted on the sounding smooth sheet included in this report with an estimated least depth of contact #4. A Notice to Mariners noting these two ridges and contact #4 will be generated by AMC. One ridge extends south from Race Rock and the other ridge runs approximately north-south, and is approximately 350 meters east of Race Rock. Three (3) of the five (5) reconnaissance soundings were gathered in 1983, and the other two (2) in

1984, which may explain why the 54-foot sounding (1984) in Latitude 41°14'28.5"N, Longitude 72°02'56.3"W, is not in alignment with the 32-foot and the 77-foot soundings gained in 1983 on the ridge extending south from Race Rock as this ridge may be migrating due to currents, storms, and seasonal changes. These ridges are not charted and the extent and shoalest depths could not be determined from this survey.

These ridges present a hazard to navigation since navigation of deep draft vessels is in close proximity of these ridges. It is recommended that a basic hydrographic survey (Field Examination) be conducted of The Race from Race Rock to Valiant Rock.

It is recommended that the reconnaissance soundings and the estimated least depth of 25 feet at contact #4 plotted on the sounding smooth sheet be charted as "reported" only until a basic survey can be conducted and then removed from the chart since they are unqualified soundings that indicate uncharted shoaling. Contact #4 has only an estimated least depth which is intentionally estimated at a shoaler depth than probable for this contact. Contacts #1 and #26 compare well with prior hydrography and no additional investigation is recommended.

Already applied through NM.

The present survey is adequate only to supplement prior data. It was not the intent of the present survey to supersede the above prior hydrographic surveys.

b. Wire Drag

H-4008 WD (1917-18) 1:20,000
H-4008a WD (1917-18) 1:20,000

The above prior wire drag surveys cover approximately 95% of the present survey with the areas not covered being in the immediate vicinity of Race Rock and to the east of Race Rock. No conflicts exist between present and prior effective depths. No conflicts exist between prior effective depths and present survey least computed depths (reported depths) by side-scan sonar contacts. The reconnaissance soundings smooth plotted and the estimated least depth (reported depth) on contact #4 are not common to either of these prior surveys.

7. COMPARISON WITH CHART 13212, 29th Edition, January 1, 1983

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys except possibly the two soundings also discussed. The previously discussed prior surveys require no further consideration. The hydrographer makes adequate chart comparisons in the Descriptive Report with the exception of the area in the vicinity of Race Rock. Comments and charting recommendations concerning the area in the vicinity of Race Rock are adequately addressed in section 6. of this report. The hydrographer additionally discussed in section L. of the Descriptive Report work accomplished on a charted obstruction in Latitude 41°16'26"N, Longitude 72°02'39"W. No field data or plots were included

in the survey records and this obstruction is outside the limits and scope of this survey.

b. Aids to Navigation

Only two aids to navigation, Race Rock Light and Valiant Rock Lighted Bell Buoy "1A", are common to the surveyed area. Bartlett Reef Lighted Bell Buoy "4", and New London Harbor Dumping Ground Lighted Buoy "NL" were located by the present survey but are outside the limits of the present survey. It is recommended that these three floating aids to navigation be charted in accordance with the most recent information. Only Race Rock Light is smooth plotted.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the Project Instructions except as noted in the Descriptive Report and this report.

9. ADDITIONAL FIELD WORK

This is a good side-scan sonar and wire drag survey which serves its intended purpose except in the vicinity of Race Rock. Additional work in this area is recommended as noted in section 6. of this report.

10. MISCELLANEOUS

a. The wire drag data smooth plotted and attached to this report was smooth plotted at the 1:40,000 scale to facilitate the inclusion of the smooth plots in this report on 8½" by 11" mylar sheets. The reconnaissance sounding smooth sheet was smooth plotted at the 1:20,000 scale. This is consistent with section 7.10. of the Project Instructions dated April 12, 1984.

b. No splits exist in the area cleared by wire drag.

Maurice B. Hickson, III

Maurice B. Hickson, III
Cartographer
Evaluation and Analysis

INSPECTION REPORT
FE-262 WD

The completed survey has been inspected with regards to survey coverage, investigation of hangs and clearance depths, cartographic symbolization, and the verification or disproval of charted data. The side scan sonar data have been inspected to gain insight into its overall completeness regarding survey coverage, presentation of survey results, and the verification or disproval of charted data.

The survey, except as noted in the Evaluation Report, is considered completed and adequate to meet National Ocean Service standards. The survey records comply with NOS requirements except as noted in the Evaluation Report. Processing is considered complete.

Inspected

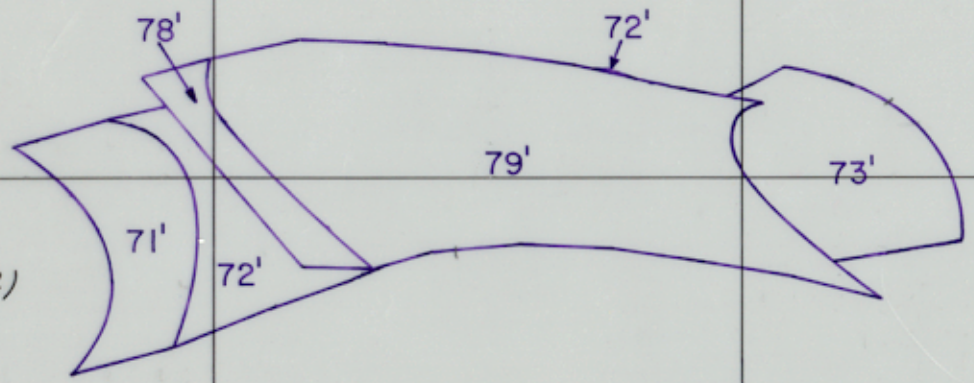
R. D. Sanocki
Chief, Hydrographic Surveys
Processing Section
Hydrographic Surveys Branch

David B. MacFarland, Jr., LCDR, NOAA
Chief, Hydrographic Surveys Branch

Approved June 28, 1985

Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

72° 10'
72° 08'
72° 06'
72° 04'
41° 16'
41° 14'
41° 12'

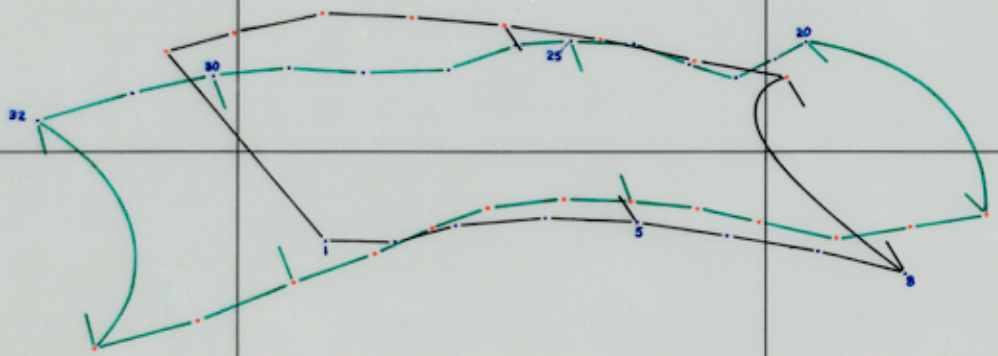


JOINS FE-268 WD (1983-84)

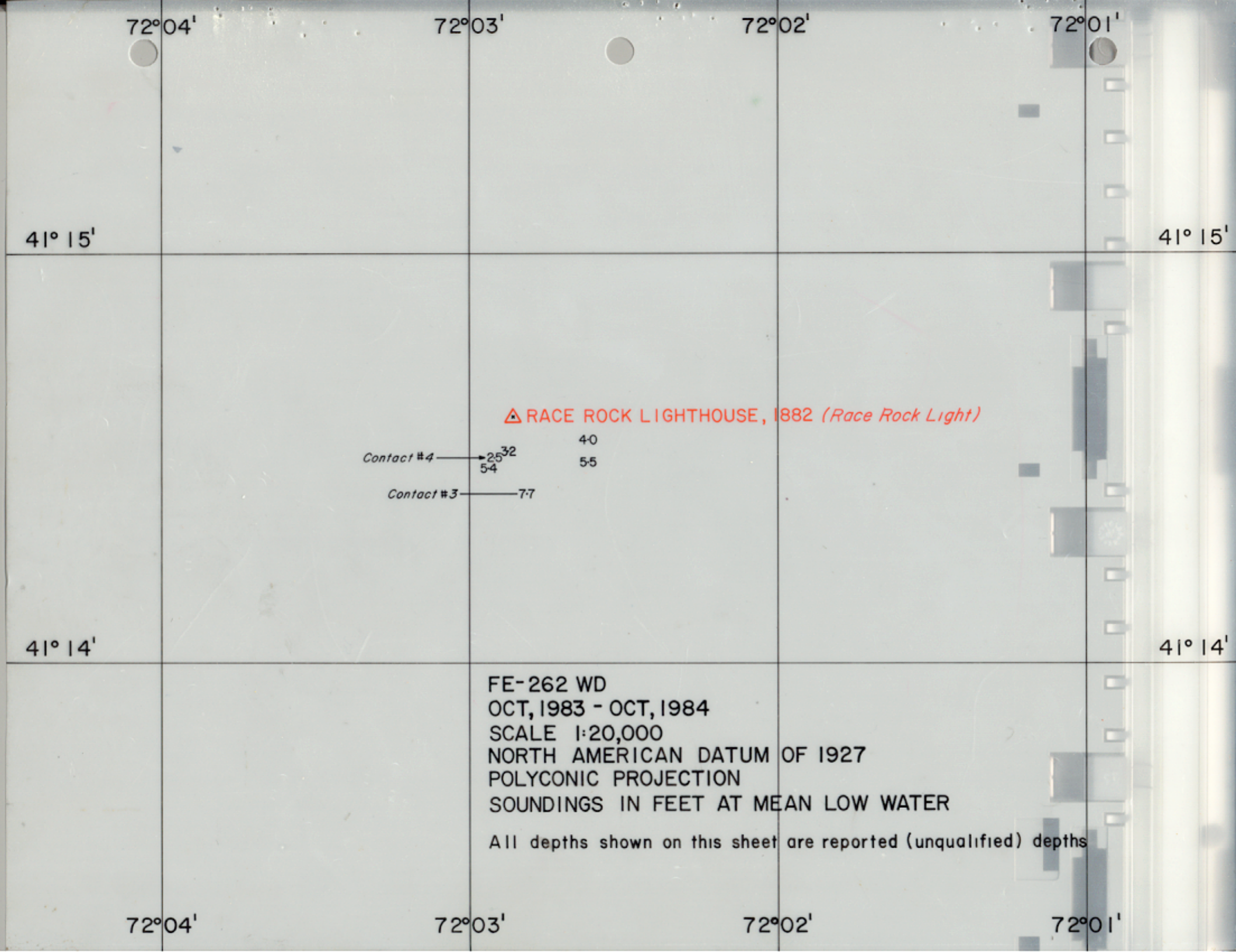
FE-262 WD
OCT, 1983 - OCT, 1984
SCALE 1:40,000
NORTH AMERICAN DATUM OF 1927
POLYCONIC PROJECTION
SOUNDINGS IN FEET AT MEAN LOW WATER

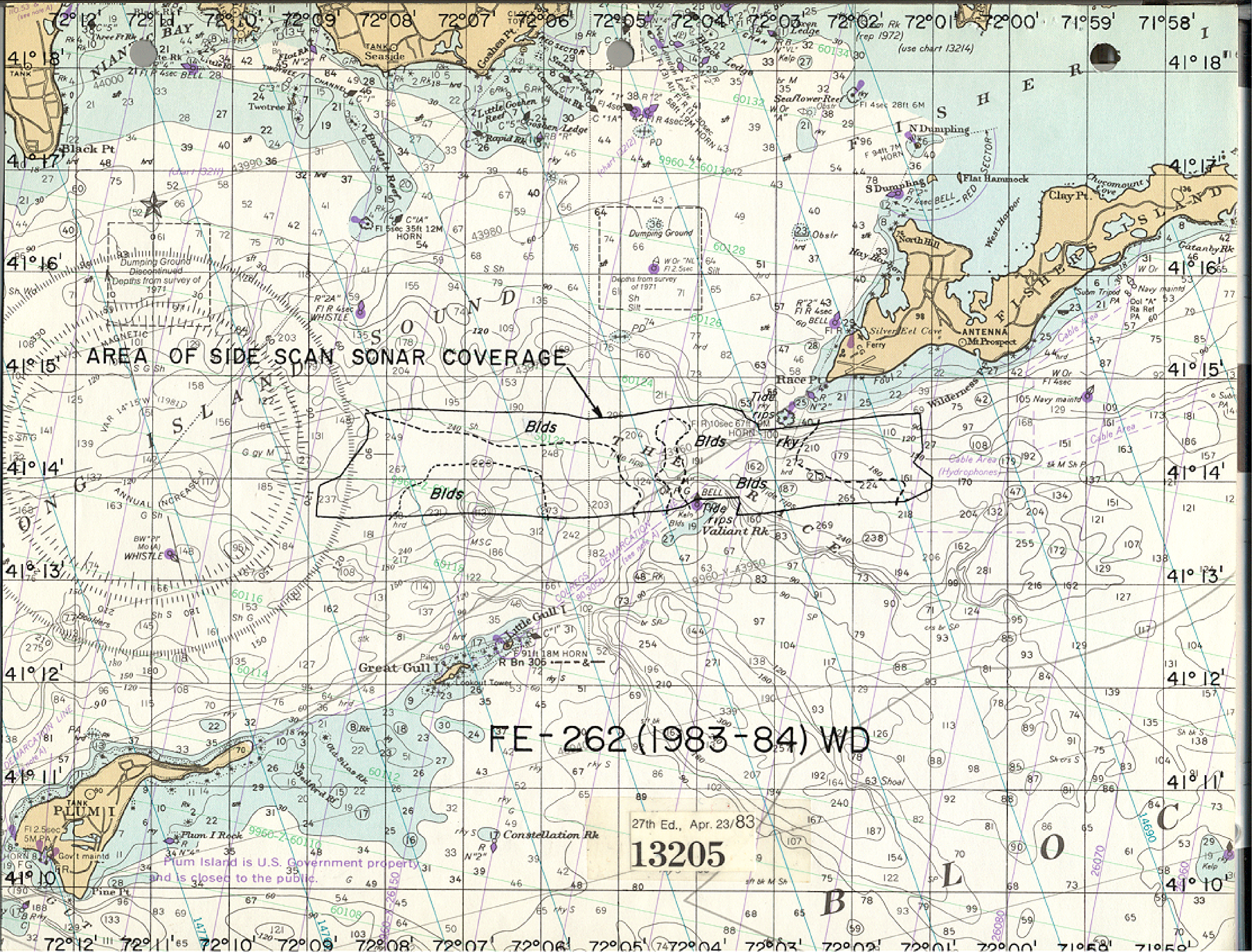
A & D SHEET

72° 10'
72° 08'
72° 06'
72° 04'
41° 16'
41° 14'
41° 12'

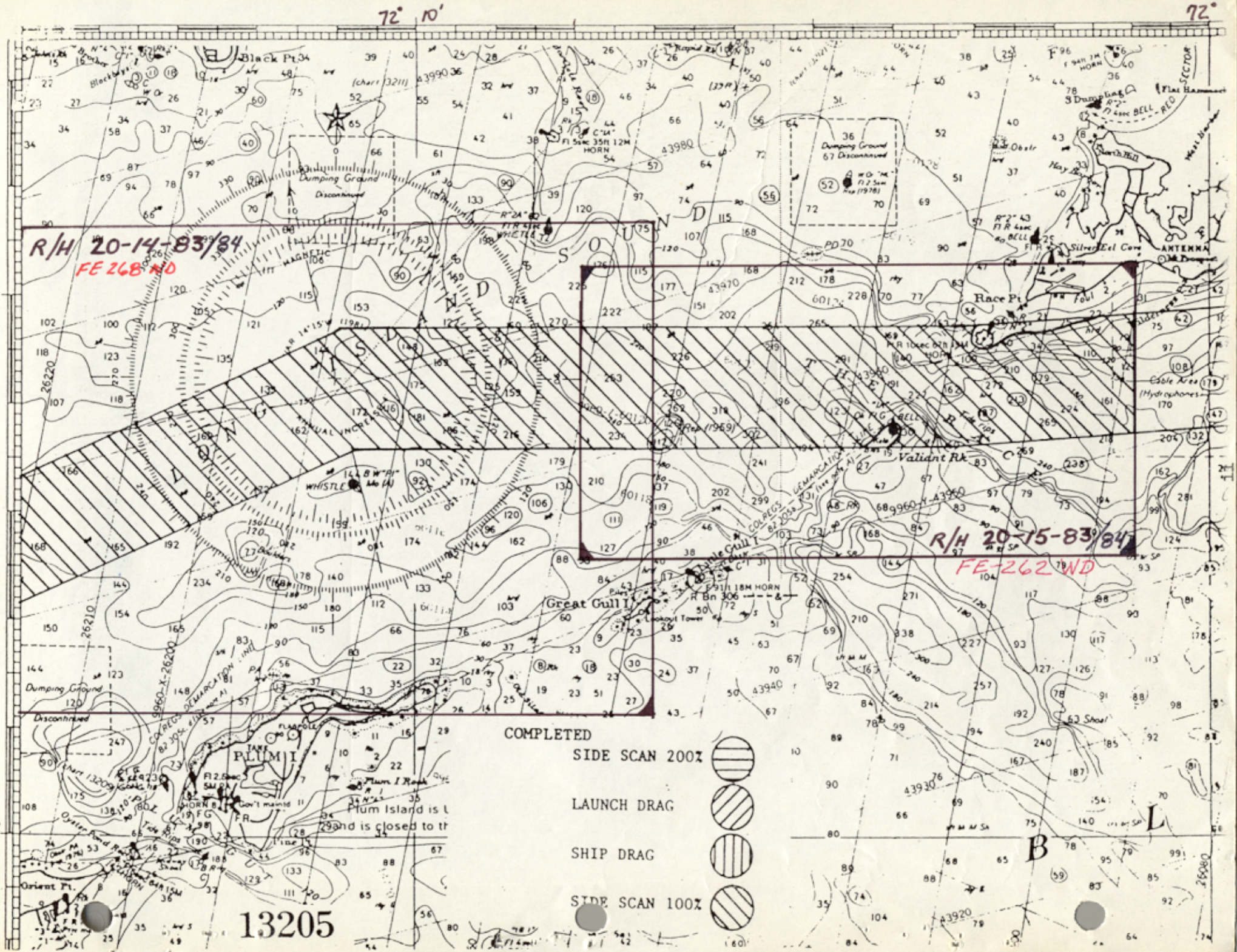


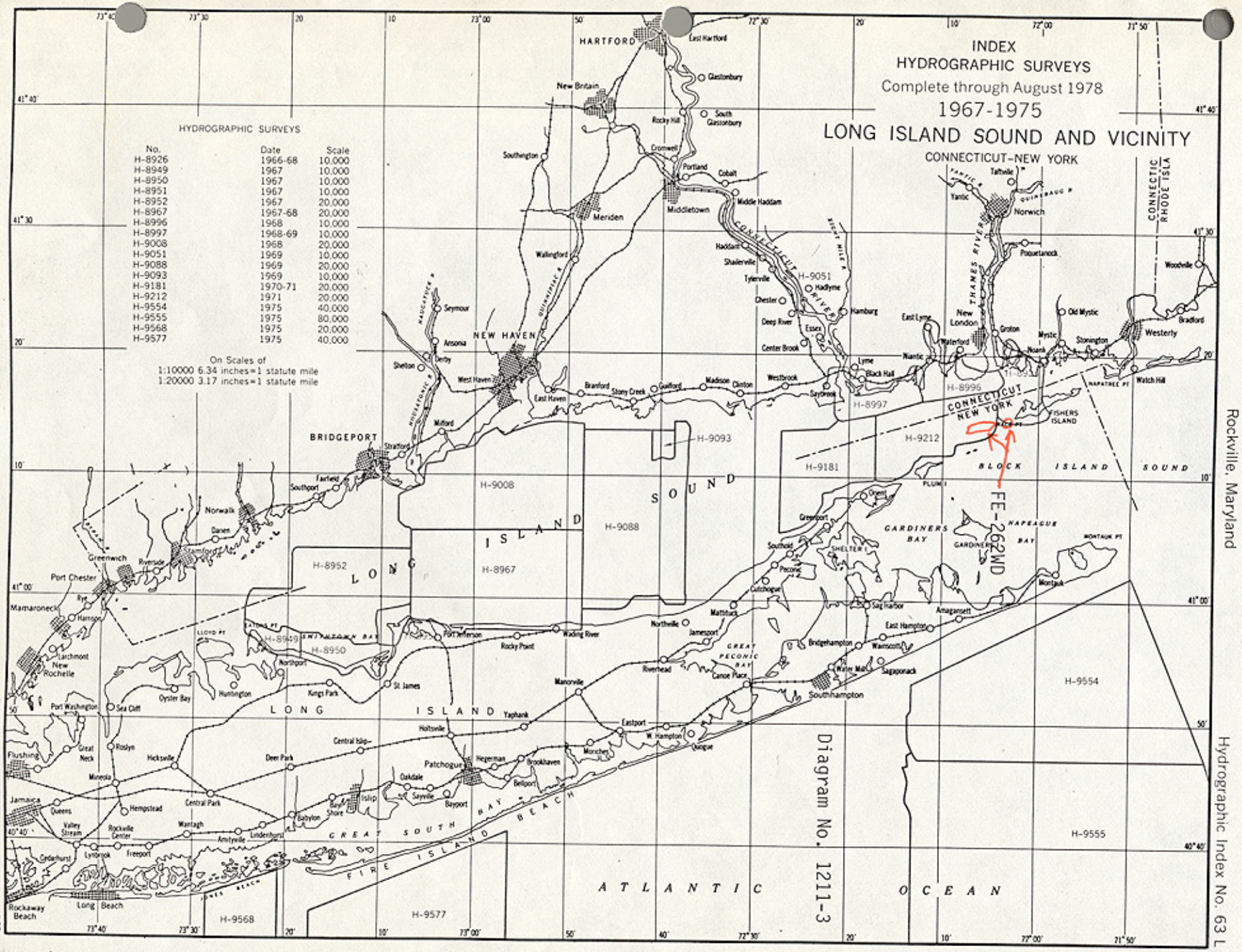
FE-262 WD
POSITION OVERLAY


72°04'
72°03'
72°02'
72°01'
41° 15'
41° 14'
RACE ROCK LIGHTHOUSE, 1882 (Race Rock Light)
4·0
5·5
Contact #4
25
32
5·4
Contact #3
7·7
FE-262 WD
OCT, 1983 - OCT, 1984
SCALE 1:20,000
NORTH AMERICAN DATUM OF 1927
POLYCONIC PROJECTION
SOUNDINGS IN FEET AT MEAN LOW WATER
All depths shown on this sheet are reported (unqualified) depths



AREA OF SIDE SCAN SONAR COVERAGE
FE-262 (1983-84) WD
27th Ed., Apr. 23/83
13205
Plum Island is U.S. Government property and is closed to the public.
Dumping Ground Discontinued Depths from survey of 1971
Dumping Ground
Depths from survey of 1971
Blds
Tide rips
Valiant Rk
Little Gull I
Great Gull I
PLUM I
Plum I Rock
Constellation Rk
Race Pt
FISHERS ISLAND
N Dumpling
S Dumpling
Flat Hammock
Clay Pt
Silver Eel Cove
Mt Prospect
North Hill
West Harbor
Goshen Pt
Goshen Ledge
Little Goshen Reef
Rapid Rk
Bartlett Reef
Twotree I
Black Pt
Seaflower Reef
Black Ledge
Valiant Rk
Cable Area (Hydrophones)
Pine Pt
Bedford Rf
Old Silas Rk
41°18'
41°17'
41°16'
41°15'
41°14'
41°13'
41°12'
41°11'
41°10'
72°12'
72°11'
72°10'
72°09'
72°08'
72°07'
72°06'
72°05'
72°04'
72°03'
72°02'
72°01'
72°00'
71°59'
71°58'


72° 10'
41° 10'
R/H 20-14-83/84
FE 268 WD
R/H 20-15-83/84
FE-262 WD
Black Pt
Dumping Ground
Discontinued
Great Gull I
Valiant Rk
Race Pt
Silver Eel Cove
ANTENNA
Orient Pt.
PLUM I
Plum Island is l
and is closed to th
COMPLETED
SIDE SCAN 200%
LAUNCH DRAG
SHIP DRAG
SIDE SCAN 100%
13205



DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 63 L

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-262WD

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
13205	7-29-85	Barbara Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #31 ~~Exam. No Correction Considered~~ Applied.
			~~Fully Applied~~ 1.0 HRS Comp 0.5-VER
12372	8-23-85	Barbara Loretz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. #25A Applied 1.0 HRS Comp. 0.5-VER
12354	6-11-86	H. Ladden	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 56 No corr. App'd. thru 12372
13212	2-7-89	Jeff Taylor	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 33
[redacted]			Full Part Before After Marine Center Approval Signed Via
			Drawing No. [redacted]
13209	5-24-89	Ernest V. Mrontz	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 26 App'd through 12372 #25A
13211	3-8-90	Ed Martin	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 21
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			STANDARDS CK'D 7-22-05 C. Loy

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.